

09/598,477
DOCKET NO. NE-1005-US/KM

2

AMENDMENTS TO THE CLAIMS:

Claim 1. (Previously presented) A transceiver circuit of a network node for converting a signal received from a transmission medium to a decoded signal that can be recognized by a higher layer and transmitting packets received from said higher layer to said transmission medium, the circuit comprising:

selector circuitry; and

control circuitry for controlling the selector circuitry for supplying the decoded signal to said higher layer and supplying, instead of said decoded signal, an idle signal to said higher layer for a predefined time interval which starts at an end timing of a packet transmitted from said higher layer to said transmission medium, said idle signal indicating that the network node is in an idle state.

Claim 2. (Previously presented) The transceiver circuit of claim 1, wherein said control circuitry is responsive to an end of said predefined time interval for supplying said decoded signal to said higher layer, instead of said simulated idle signal.

Claim 3. (Previously presented) The transceiver circuit of claim 1, wherein said predefined time interval is equal to a turnaround time of said transmission medium.

Claim 4. (Previously presented) The transceiver circuit of claim 1, wherein said control circuitry is configured to detect a data end message as an indication of the end of transmission of said packet.

09/598,477

3

DOCKET NO. NE-1005-US/KM

Claim 5. (Previously presented) The transceiver circuit of claim 1, wherein said transmission medium comprises a serial bus and wherein said circuit further comprises a serial to parallel converter for converting a signal from said serial bus to a parallel signal, and a decoder for converting the parallel signal to said decoded signal.

Claim 6. (Previously presented) The transceiver circuit of claim 5, wherein said serial to parallel converter is connected to said serial bus via an IEEE-1394 interface.

Claim 7. (Previously presented) The transceiver circuit of claim 3, wherein said control circuitry comprises:

- a start-of-child-notify detector for detecting a start timing of a child-notify signal from said higher layer which is transmitted from the network node to a child node as a response to a signal from the child node;

- an end-of-parent-notify detector for detecting an end timing of parent-notify signal received from said child node;

- first counter circuitry for incrementing a first count value in response to the detection of the start timing of said child-notify signal by the start-of-child-notify detector until said end-of parent-notify detector detects the end timing of said parent-notify signal; and

- comparator circuitry for comparing said first count value with a second count value which corresponds to said predefined time interval and controlling said selector circuitry according to relative values of said first count value to said second count value.

Claim 8. (Previously presented) The transceiver circuit of claim 7, wherein said

09/598,477
DOCKET NO. NE-1005-US/KM

4

comparator circuitry comprises:

an end-of-data-end detector for detecting an end timing of a data-end signal transmitted from said higher layer to said transmission medium; and

second counter circuitry for incrementing a second count value in response to the detection of the end timing of said data-end signal by the end-of-data-end detector until the second count value equals the incremented first count value and controlling said selector circuitry for supplying said idle signal to said higher layer for an interval during which said second counter circuitry continues to increment said second count value.

Claim 9. (Previously presented) A communication system comprising a plurality of nodes interconnected by transmission lines, wherein each of said nodes comprises:

selector circuitry; and

control circuitry for controlling the selector circuitry for supplying a decoded signal to a higher layer and supplying, instead of said decoded signal, an idle signal to said higher layer for a predefined time interval which starts at an end timing of a packet transmitted from said higher layer to a transmission medium, said idle signal indicating that a network node is in an idle state.

Claim 10. (Previously presented) A communication method for a network node for converting a signal received from a transmission medium to a decoded signal that can be recognized by a higher layer and transmitting packets received from said higher layer to said transmission medium, the method comprising:

supplying, instead of said decoded signal, an idle signal to said higher layer for a

09/598,477
DOCKET NO. NE-1005-US/KM

5

predefined time interval which starts at an end timing of a packet transmitted from said higher layer to said transmission medium, said idle signal indicating that the network node is in an idle state; and

supplying the decoded signal to said higher layer, instead of said idle signal, at the end timing of said predefined time interval.

Claim 11. (Previously presented) The method of claim 10, wherein said predefined time interval is equal to a turnaround time between said network node and a node connected to a distant end of said transmission medium.

Claim 12. (Previously presented) A recording medium for recording a control program for describing the operation of a network node which converts a signal received from a transmission medium to a decoded signal that can be recognized by a higher layer and transmits packets received from said higher layer to said transmission medium, wherein said control program comprises instructions for:

supplying, instead of said decoded signal, an idle signal to said higher layer for a predefined time interval which starts at an end timing of a packet transmitted from said higher layer to said transmission medium, said idle signal indicating that the network node is in an idle state; and

supplying the decoded signal to said higher layer, instead of said idle signal, at an end timing of said predefined time interval.

Claim 13. (Previously presented) The recording medium of claim 12, wherein said

09/598,477
DOCKET NO. NE-1005-US/KM

6

predefined time interval is equal to a turnaround time between said network node and a node connected to a distant end of said transmission medium.

Claim 14. (Currently amended) A communication method for a network node attached to a serial bus, the method comprising:

setting a state machine in a receive mode;

~~exchanging signals between the network node and a remote node attached to a distant end of the bus and determining a measured turnaround time based upon the turnaround time between sending a child notify signal from said network node to said remote node and receiving a parent notify signal from said remote node at said network node of said signals between said network node and said remote node; and~~

setting the state machine in an idle mode for an interval beginning with an end timing of a packet transmitted from the network node to said bus until said interval corresponds to the measured turnaround time.

Claim 15. (Currently amended) A communication method for a network node attached to a serial bus, the method comprising:

setting a state machine in a receive mode;

incrementing a time count value beginning with a start timing of a child notify signal transmitted from the network node to said bus and terminating the increment of the time count value at an end timing of a parent notify signal received by the node from said bus; and

setting the state machine in an idle mode for an interval beginning with an end timing of a packet transmitted from the node to said bus until said interval corresponds to the

09/598,477

7

DOCKET NO. NE-1005-US/KM

incremented time count value.

Claim 16. (Original) A network node attached to a serial bus, comprising:

first circuitry for exchanging signals between the network node and a remote node attached to a distant end of the bus and determining therefrom a turnaround time between said nodes; and

second circuitry for supplying a signal received from the serial bus to a higher layer and supplying, instead of said received signal, an idle signal to said higher layer for an interval beginning with an end timing of a packet transmitted from said higher layer to said bus until said interval corresponds to the turnaround time, said idle signal indicating that the network node is in an idle state.

Claim 17. (Original) A network node attached to a serial bus, comprising:

first circuitry for incrementing a count value beginning with a start timing of a child notify signal transmitted from the node to said bus and terminating the increment of the count value at an end timing of a parent notify signal received by the node from said bus; and

second circuitry for supplying a signal received from the serial bus to a higher layer and supplying, instead of said received signal, an idle signal to said higher layer for an interval beginning with an end timing of a packet transmitted from said higher layer to said bus until said interval corresponds to the turnaround time, said idle signal indicating that the network node is in an idle state.

Claim 18. (Previously presented) The transceiver circuit of claim 2, wherein said

09/598,477
DOCKET NO. NE-1005-US/KM

8

predefined time interval is equal to a turnaround time of said transmission medium.

Claim 19. (Previously presented) The transceiver circuit of claim 2, wherein said control circuitry is configured to detect a data end message as an indication of the end of transmission of said packet.

Claim 20. (Previously presented) The transceiver circuit of claim 3, wherein said control circuitry is configured to detect a data end message as an indication of an end of transmission of said packet.

Claim 21. (Previously presented) The transceiver circuit of claim 1, wherein said control circuitry comprises:

a start-of-child-notify detector for detecting a start timing of a child-notify signal from said higher layer which is transmitted from the network node to a child node as a response to a signal from the child node.

Claim 22. (Previously presented) The transceiver circuit of claim 21, wherein said control circuitry comprises:

an end-of-parent-notify detector for detecting an end timing of parent-notify signal received from said child node; and

first counter circuitry for incrementing a first count value in response to the detection of the start timing of said child-notify signal by the start-of-child-notify detector until said end-of parent-notify detector detects the end timing of said parent-notify signal.

09/598,477

9

DOCKET NO. NE-1005-US/KM

Claim 23. (Previously presented) The transceiver circuit of claim 22, wherein said control circuitry comprises:

comparator circuitry for comparing said first count value with a second count value which corresponds to said predefined time interval and controlling said selector circuitry according to relative values of said first count value to said second count value.

Claim 24. (Previously presented) A transceiver circuit of a network node for converting a signal received from a transmission medium to a decoded signal that can be recognized by a higher layer and transmitting packets received from said higher layer to said transmission medium, the circuit comprising:

selector circuitry; and

means for controlling the selector circuitry for supplying the decoded signal to said higher layer and supplying, instead of said decoded signal, an idle signal to said higher layer for a predefined time interval which starts at an end timing of a packet transmitted from said higher layer to said transmission medium, said idle signal indicating that the network node is in an idle state.